

What is claimed is:

1. A thin speaker, characterized in that a frame is made to be of a two-piece structure with an upper frame (5) and a bottom frame (8) disposed on the back side thereof concentrically and joined with their parts overlapping;

the upper frame (5) is supporting a vibration system including a cone-shaped diaphragm (3) having an edge (4) at an outer periphery, a voice coil (6) joined with a neck part of this diaphragm (3), a damper (9) supporting the voice coil (6) and so on;

a central part of the bottom frame (8) is supporting a supporting member (7, 7A) for a magnetic circuit (2) in a magnetic gap of which the voice coil (6) is disposed; and,

the supporting member (7, 7A) is positioned in the neck part of the diaphragm (3).

2. The thin speaker according to claim 1, characterized in that an outer peripheral part of the edge (4) is supported by an outer peripheral part of the upper frame (5), and an outer peripheral part of the damper (9) is supported by a part around a hole (5d) formed in a central part of the upper frame (5).

3. A method of manufacturing a thin speaker, characterized in an assembling comprising:

putting a magnetic circuit (2) on a central part of a first jig (1),

attaching a short columnar supporting member (7) for supporting the magnetic circuit (2) on an upper part thereof,

through a substantially cylindrical second jig (12) disposed around the member (7) for positioning a voice coil, disposing the voice coil (6) at a proper position in a magnetic gap of the magnetic circuit (2),

attaching a neck part of a cone-shaped diaphragm (3) to an outer periphery of the voice coil (6),

having an edge (4) at an outer peripheral part of the cone-shaped diaphragm (3) be supported by an outer peripheral part of an upper frame (5) formed to have a hole (5d) in a central part and to be put over a rear side of the diaphragm (3),

assembling a damper (9) from the rear side thereof, attaching its inner peripheral part to the outer periphery of the voice coil (6) and having an outer peripheral part be supported by a part around the hole (5d) of the upper frame (5),
pulling out the second jig (12) from the hole (5d),
putting a bottom frame (8) on from the rear side thereof, and
having the supporting member for the magnetic circuit (2) be supported by the bottom frame (8).

4. A method of manufacturing a thin speaker, characterized in an assembling comprising:

putting a magnetic circuit (2) on a central part of a first jig (1),
through a substantially cylindrical second jig (12) which is for positioning a voice coil and disposed around a short columnar supporting member (7A) provided on an upper part of the magnetic circuit (2), disposing the voice coil (6) at a proper position in a magnetic gap of the magnetic circuit (2),

attaching a neck part of a cone-shaped diaphragm (3) to an outer periphery of the voice coil (6),

having an edge (4) at an outer peripheral part of the cone-shaped diaphragm (3) be supported by an outer peripheral part of an upper frame (5) formed to have a hole (5d) in a central part and to be put over a rear side of the diaphragm (3),

assembling a damper (9) from the rear side thereof, attaching its inner peripheral part to the outer periphery of the voice coil (6) and having an outer peripheral part be supported by a part around the hole (5d) of the upper frame (5),

pulling out the second jig (12) from the hole (5d),

putting a bottom frame (8) on from the rear side thereof, and

having the supporting member of the magnetic circuit (2) be supported by the bottom frame (8).